Abstract

An abstraction mechanism is disclosed, which is capable of recognizing and abstracting precharged latches and flip-flops, and which is capable of generating a cycle ready representation of the precharged latches and flip-flops. In one embodiment, the

5   abstraction mechanism abstracts precharged latches and flip-flops by using cofactors. In doing so, the abstraction mechanism accesses a logic level representation of a structure. Based upon the logic level representation, the abstraction mechanism derives one or more cofactors. These cofactors are then tested to determine whether they indicate precharge behavior, and whether they indicate latch or flip-flop behavior. If the cofactors indicate

10   both precharge behavior and latch or flip-flop behavior, then the abstraction mechanism abstracts the structure as a precharged latch, or a precharged flip-flop, whichever is appropriate. By recognizing and abstracting precharged latches and flip-flops in this manner, the abstraction mechanism simplifies the functional representation of the structure, and makes it possible to generate a cycle ready representation of the structure.